maintaining, however, at all costs, relative truth between part and part and unity of general effect.

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As regards linear composition, the main thing is to bear well in mind the lines and proportions which you already have in your canvas. It is not only that it never answers to take an oblong canvas for an upright composition, and vice versa—it is obvious that a complete change in the nature of the subject would follow whether the subject were stretched or compressed, or docked or extended ; but also that a certain monotony will ensue if upright or horizontal lines very evidently dominate in the subject—since these already exist in the sides of your canvas. On the other hand, steep slopes alone may give an impression of unrest. The best general rule is to pay great attention to the character of the diagonal lines. If they are steep, and accompanied by rugged perpendicular masses, the effect will be wild ; if nearly horizontal and accompanied by rounded clouds or trees, it will be quiet and soft; if approaching an angle of forty-five degrees, and accompanied by both upright and horizontal lines of importance, the effect may be varied and agreeable, but can hardly be strong, since no one element in it has a decided mastery.

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After the main lines of a picture, its effect depends most on the values of the masses which they bound. It is well, then, to make many sketches for values mainly, and not to take any subject for a picture of which one has not one or more good studies in values. Such a study may be in black and white, or it may be in color ; but in the latter case attention should have been directed principally to the relations of the various colors, as darks and lights. It will not do, for instance, to note that a tree is green and the sky back of it blue or gray. It must be shown whether the tree is lighter or darker than the sky, and by just how much. It is vastly more dangerous to play with values than with lines, for the reason that they represent more general, and consequently more important facts. The apparent forms of natural objects are subject to an immense number of accidental changes ; their values to so few that the cause of a change should be at once understood. The same tree may be light or dark accordingly as it is autumn or mid-summer, or sunlit or in shadow, or more or less distant from the eye ; but the occasions of change are so few, so striking, and so generally observed, that a false value is almost sure to give an effect of falsity to the entire picture. A landscape effect should, therefore, never be invented. That is the reason why we have recommended that the sketch for effect be made the basis of the picture. The requirements are the same as in still life. There should be a strong light or dark, nearly central, bringing out or indicating the most interesting object or group ; this should be echoed not too far away, and should be supported on either side by tones less intense, but perhaps covering greater spaces. The effects in which these medium tones are dominant are much the easiest for beginners. Strong contrasts in their hands are very apt to become crude and stagy.

The manner of tracing from nature invented by Lionardo da Vinci may be simplified as follows : Get a large pane of glass in a strong wooden frame, which fix firmly by clamps and screws to the farther edge of your table. Cover the glass with a slight coat of turpentine, which is to be allowed to dry on it. It will form a tooth which will take crayon or India ink, while it will remain perfectly transparent. The object to be drawn may be fixed behind it on another table, a box or any other support ; or if it is a view out the window which is to be drawn, it is sufficient to move your table and glass into position. In front of the glass, at the near edge of the table, have a candlestick and candle not to be lit, but for another purpose which will be indicated. Get a circular piece of card-board, an inch and a half or two inches in diameter. In the centre of it make a small hole to look through, and fix this with a pin, at a convenient height, to the candle. The position once chosen, nothing must be moved in the least degree till the drawing is finished. You place your candlestick with its eyepiece directly opposite the glass. You look through the eye-hole, which will keep you always to the one point of sight, and draw with lithographer's crayon on the prepared surface of the glass. When the drawing is finished, it can be traced and transferred to paper in the ordinary manner. The process is especially useful in demonstrating the rules of perspective and in acquiring a correct notion of the effects of foreshortening.

A good mechanical way of obtaining a cast of a face, without subjecting the model to the torture of the old-fashioned method of coating his face with plaster while he breathes through two quills stuck in his nostrils, has been invented by M. Sauvage. The machine consists of a shallow box or block full of small holes at equal distances apart, through which run easily small metallic rods with blunt ends, about as thick as knitting-needles. When this is laid upon the face of the person to be operated on, the rods run out more or less according to the distance of the features from the front of the block. A little hot wax poured on at the back holds them firmly in place as soon as it gets cold. The machine is then taken off and the interstices between the rods in front are also filled with wax, giving when cold a perfect cast in reverse of the features, from which a cast in relief in plaster can be got in the usual way.

HINTS ON FLOWER PAINTING.

It is well understood that certain flowers change rapidly in contour and still more rapidly in position, owing to changes in the flexibility of their stems. This is the case, even as they grow. Plucked and arranged in a bouquet the change is still more marked. It often happens that within an hour, even if none of the flowers wither, the character of the whole group is different. From this perishable or changeable nature of the model may be deduced certain instructions of especial importance to the student and the amateur. The group should be simple ; leave complicated subjects, requiring a long time to finish, to accomplished painters. Great skill and certainty should be acquired in drawing, so as to fix as quickly and correctly as possible the forms of the group. The drawing made, the general effect should be studied. This depends mainly on the light. Care should have been taken to get the group of flowers in a good light, bringing out particularly certain flowers. The light should not be subject to change. Those chosen flowers most strongly lit or brought out most prominently against the background should have their special forms and tones well but quickly noted at the beginning of the painting. The whole attention afterward should be given to the ensemble ; but if opportunity serve, the particularization of individual forms may again be returned to when the effect is secured. In the case of large work likely to demand more than one sitting, photography may render help that should not be despised in preserving not only the outlines, but the light and shade of the whole bunch and of the several flowers composing it. But the beginner should not get in the habit of using the photograph, and should confine himself to what he can finish in a sitting. To be of use at all, it is hardly necessary to add, the photograph should be taken from the exact point of view which the artist occupies when working, *after* he has completed his outline sketch.

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In the case of elaborate works several means are used to lessen in some degree the difficulties of flower painting. One is to reserve certain unopened flowers, which it is judged may, when open, take the place of others of the sort, by that time withered. These may be pinned against the wall or a drawing-board in the required position, that they may not lose the pose, so to speak. Or the whole of the first day's sitting may be given to the flowers in the foreground or otherwise prominent, leaving the ensemble for the second day's work. Beginners may also get a great deal of excellent practice out of artificial flowers, well chosen and arranged.

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Work modelled in the wet color is usually found when dry to be too light in tone and too much broken in effect. The painter's effort should then be to find a demi-tint which, when passed over a large portion or portions of the subject, will reduce the general tone properly, while leaving the more brilliant local tones where they belong, and so bring about a good effect of ensemble. This tone, too, should be modified while wet, playing into it here with one color, there with another, or with water to lighten it. This also allowed to dry, the separate forms may be taken up one by one or group by group, here strengthening a shadow, there taking out a light, defining a contour in one place and blending it with the mass in another ; adding also certain local tones of small extent, but of so much the more importance as giving life and point to the whole.

PROFESSOR HUBERT HERKOMER'S PRACTICE IN POS-
ING AND MANAGING HIS SITTERS.

The first essential in the art of portrait painting is to assert your position as the master of your model. Practically speaking, I never now go to my sitters. When I have done so my pictures have almost always been failures. In the first place, it is absolutely necessary for me to have my own lighting. My studio is illuminated in the way which practice has shown me to be the best—that is, by a double light. I gain roundness by flooding my sitter with the full top-light, and I dissipate the heavy shadows and hard lines by the side-lighting coming direct upon the face. This is to all intents and purposes the effect of daylight.

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Nothing is so unlucky for a portrait painter as not to like his sitter. The painting ought to proceed in the light of personal sympathy. It must not be forgotten that portraiture is the most exhausting work in the world, and if it is not carried on under the most favorable circumstances possible, it resolves itself into a painful drag upon the spirits. There is a curious difference between painting from a model and painting a portrait. The model is a piece of nature, with which one has no necessary communication of ideas. One paints one's man, in that case, as though he were a rock or a tree. But in the other kind of art the sitter is everything, the painter is absorbed in his relation to him. When I am painting a person, I belong, for the time, to that person and to no one else. It is a curious physical fact that to paint an old or feeble man, in whom the light of vigor has to be constantly kept burning, drains me to positive exhaustion. On the other hand, painting the portrait of a pleasant, cheery and healthful person refreshes me like exercise in the open air.

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The other day a man who was to sit to me went into a print shop and looked over one hundred and fifty proofs of engravings, seeking for a becoming position. He found one which he liked at last, and proposed to adopt it. It proved absurd, and I was not able to indulge him for a moment in an attitude so unfitted to his style of figure. It is entirely the duty of the painter, and in no degree that of the sitter, to settle this question. The painter has to find the best view of the head, and also of the body, and it is essential to do this without the knowledge of the sitter. The common cant tells you to paint a man "as he is," but fails to say at what moment. It is merely justice, then, that you should take some pains to catch a sitter at his best. Wait till he has a pleasant expression, and then seize it. It will repeat itself often enough to secure it permanently in his picture. This is quite another thing from that amiable rounding off of all the angles which some painters believe to be justifiable. I always try to retain all the strength, and yet some of my greatest successes have been those in which I have had to wait and wait for the best expression and the most agreeable attitude. Get through the man, and if you are patient you will, sooner or later, find the best illustration of himself on his face.

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I always used half-primed Roman canvases from Winsor & Newton. My own man covers them with what is called Davey white (a mixture, I believe, of flake white, whiting and dryers), which I make him lay on, not quite uniformly, but in a mottled way, so that the surface looks like that of watered silk. This is a mere fancy, of course. It is smooth, but thin enough to let the grain of the canvas be seen and felt beneath it in places.

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The first sitting often turns out to be a great disappointment to a painter, especially if he has the old kind of studio, with a single north light. You paint what you see, but the result is other than what you expected it to be. Here comes the advantage, which I have already spoken of, of having two lights. I always draw in, in the first place, with charcoal, and then paint direct upon the same canvas. I do as much as I can in one hour, and then, in the case of the first sitting, no more. There is no use in trying to go further at the opening of the work.

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It is important that the sitter should be so placed that your sight is a little below his. For that purpose all painters use a throne eighteen inches higher than the

floor. This low sight enables one to get nobler and more artistic lines into the composition, but it must not be pushed too far. If the sitter is too high the painter foreshortens the head too much. The work only becomes characteristic at the second sitting.

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NOTHING so clearly illustrates a man's method of work as the way in which he puts on his color first. I work myself on the lines of *prima* painting. The first thing of all is to get the flesh-tones correct, and I do this as from a model, with no attempt at likeness, which is quite a secondary consideration at that stage of the proceedings. To match the tones of the flesh tints on cheek, hair, coat and shirt, is the basis of that art of impression upon which our modern portraiture is founded. Some will dispute the fact, but to me nothing in the later stages of the work ever equals the quality of the first touch of color upon a fresh white canvas. I sacredly guard these earliest touches on my own can-vases. If I possibly can avoid doing so I never cover them, and if I do so it is with thin, light touches, so as to tamper as little as possible with the original cast or quality.

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FUTURE sittings are a struggle between what you think you ought to do and what you personally want to be doing. As a matter of fact, I almost always go on with the face; I cannot leave it till I have somewhat secured it. It takes hold of me and haunts me until I have made it in some degree what it should be.

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I CANNOT have one sitter only at a time. It is nec-essary to me to turn from one man's face to another's. I find that an average of one hour and a half in the day is as much as I can endure in the painting of one sitter, but I like to have one sitter on pretty nearly consecutive days. The longest time a portrait ever takes me with the sitter is sixteen hours. I have done the work in ten hours. But I often work without the sitter, "pulling the paint together," as we call it, between the sittings, so that I can put the grit in when the sitter comes again, and there is much one can do in the case of lady portraits by other people sitting in the dresses.

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"PICTURE-MAKING" in portraiture is dangerous, and is even in the best examples by old masters hardly successful. But treating a sitter in a pictorial way is quite another thing. It is our constant desire to find a pose and arrangement that will give us the best chance for good lines of composition, and a distribution of lights and depths in the background to relieve any monotony arising from a modern man's costume. We are plagued at every moment with the word "artistic," because the odds are heavily against us in modern cos-tume, at least of men. But a modern black coat can be treated artistically or inartistically, and we sometimes help ourselves to fur-lined overcoats and other devices to aid the pictorial effect.

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HOW often it is said, "I suppose you get somebody else to paint the hands and background?" The back-ground, indeed! I remember Millais once saying to me in a frenzy of despair, "That's the tenth background I've had in that portrait, and now it isn't right." At times the tone of the background means changing the whole scheme of color and the tone of the face. One thing is certain, that to commence a portrait without being quite sure what the background is to be is fatal—it unnerves the painter, and by a reflex action worries the sitter.

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IT is necessary to guard the sitter from all anxiety as to the probable success of the portrait, but the painter can, and should, from the first moment take the sitter into his entire confidence with regard to his intentions, and so make it (like the organ-blow r and player) a matter of "we." To show them the portrait from the first will save the painter the greatest anguish.

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[THE portrait is finished.] Then comes the phrase from husband to wife, or vice versa, as the case may be—"Ah! just stand next to the portrait, dear!" There is no question as to whether the sitter is in the same light or position. Nothing can be more unjust to the painter, or more irritating, and I have always put my foot down firmly, and have forbidden it in my studio. How are men and women looked at by numbers of their familiars? They take their relatives close up to the win-dow to see the exact color of the eyes, or cut off a bit of hair, and expect it to be matched in the portrait. They never look

at form, but only at expression, and are not a little surprised sometimes to find their papa's nose really is not straight, and that one eye is considerably lower down in the face than the

other. Then we must take into consideration the ignorance of most people in matters of foreshortening of limbs, and, in fact, ignorance of all perspective in form. To get a portrait figure

into good lines of composition it is necessary to draw him, as I have said before, from a rather low point of sight. That is why we put him on a higher platform than our painting level. But
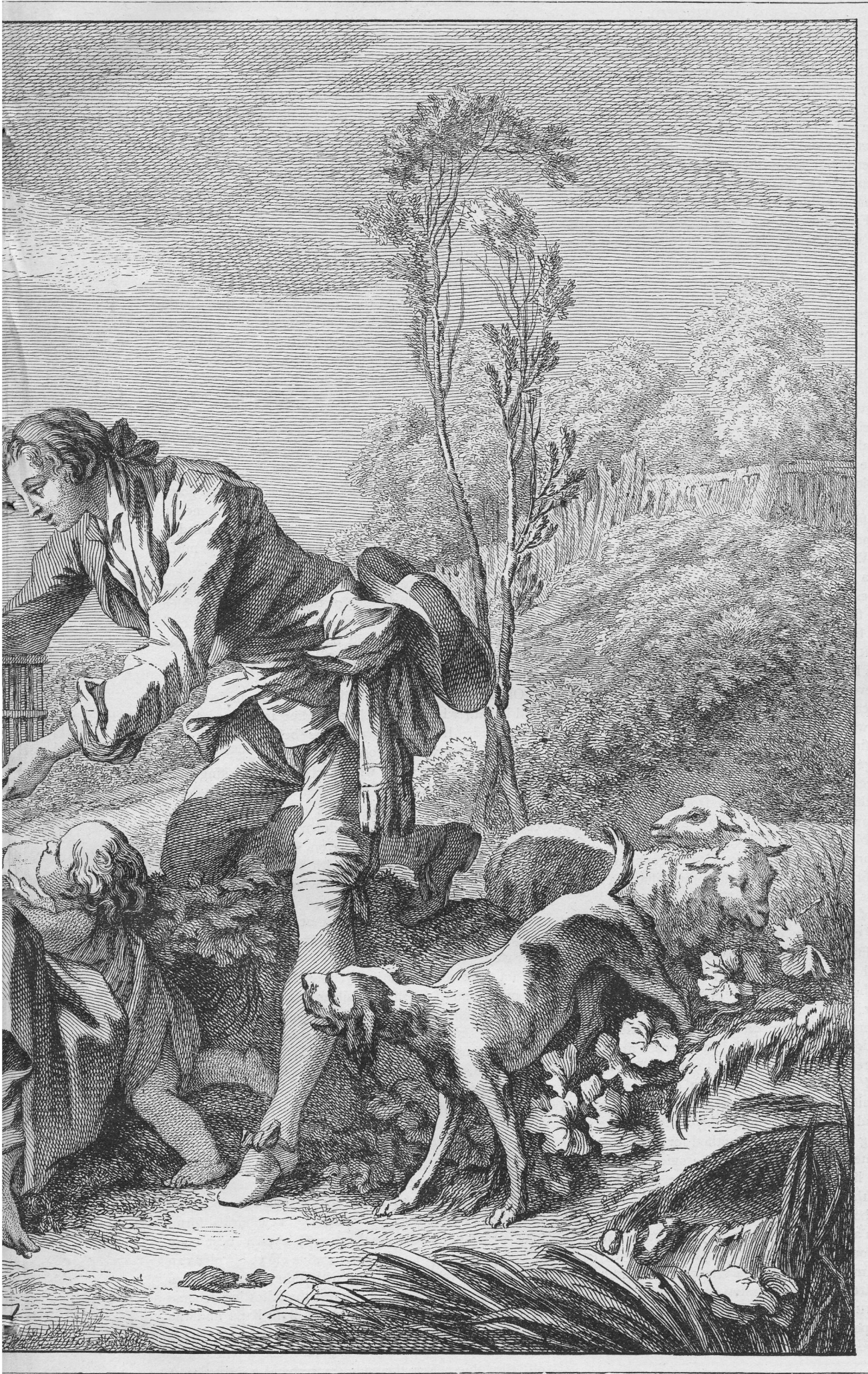
that means reducing the size of the head above the brows and lengthening the limbs. Nothing, therefore, will persuade the ordinary observer that the forehead is really the right size

"THE COURTEOUS SHEPHERD." DESIGN FOR TAPESTRY PAI

It is best to let the family see the work progress, because they learn in that way to look at the original with a bit of the painter's eye, and are, moreover, so deeply interested in the selves, and quite unnecessary. To talk while working is equally difficult to some. But it is necessary that the sitter should either listen to the painter's conversation or the painter to his. Who-

BOUCHER DESIGN FOR TAPESTRY PAINTING.

AVAILABLE FOR WALL-HANGING, PORTIÈRE OR SCREEN.

This charming design, probably made originally for woven tapestry, is given here for tapestry painting. It may be used for a wall hanging or a portière, or for a single screen, by leaving out some of the landscape on either side. For a portière it would require a band of some rich material at the top and bottom, the picture being enlarged so as to occupy the whole of the space between. Or the group could be used to form the centre part of the Louis XIV. panel published a few months since. This design would also make an elegant curtain.

Stretch the wool tapestry canvas carefully and firmly in a wooden frame, then pounce on the pricked design enlarged to the required size. Go over the dotted lines with a fine pointed crayon, then beat out the pounce powder. Use Grénié dyes and medium, being very careful to mix the medium with the colors before apply-ing them to the canvas. Begin with the sky. For the first tint mix a very little indigo with two thirds medium and one third water ; the tint should be very pale. Lay it in all over the sky, except where the white clouds appear. Put it in also under the trees. When half dry paint in the clouds with gray. For the darker clouds on the left add to the gray a touch of sanguine to warm it. Pass a clean brush filled with medium only over the white clouds, to take off the crudeness and blend the edges into the blue. Before the sky is quite dry block in the distant trees with a light mixture of cochineal and indigo. Later on finish the trees with a greenish tint, composed of yellow, emerald green and gray. The near trees may be painted with a stronger shade of the same tint, shaded with a mixture of yellow, indigo and san-guine. The foliage in the foreground should have various pale shades of blue and yellow green scrubbed in, regardless of form, and afterward, when this is dry, the forms should be picked out with darker shades and warm touches of sanguine here and there. For the sheep use a very light yellow with a drop of ponceau in it, to be toned down with gray. For the shadows use gray and sanguine. The scheme of color suggested for the figures is as follows : For the upper part of the drapery of the girl a pale primrose, the local tint yellow only, diluted to the required shade. The shadow color may be yellow and brown mixed, or yellow, san-guine and indigo mixed. If too bright, introduce, when partially dry, a little complementary color, made by mix-ing ultramarine and ponceau or rose. The lower part of the drapery should be heliotrope. For this mix ultra-marine, ponceau and sanguine. The drapery of the child may be a soft blue, made by mixing ultramarine, indigo and cochineal, with a little sanguine added in the shadows. The man's coat, hose and hat may be green-ish gray ; the color can be obtained by mixing emerald green and sanguine. A little yellow must be added for the local tint. The knee breeches, vest and bows are old pink. For the shadows use sanguine and ponceau mixed. For the pale tint ponceau, very weak, with a touch of yellow added. The sash and shoes are tan ; mix brown and yellow together for this. Full directions for the painting of the flesh and hair were published so recently in The Art Amateur, in the scheme given for the " Elements," that it is scarcely necessary to repeat them here.   EMMA HAYWOOD.

NTING. FACSIMILE OF AN OLD ENGRAVING AFTER BOUCHER.

workmanship that they become different critics at the end of the training. Many painters cannot work when looked at. But that is a nervousness brought on by the painters them-selves ever is present at the sitting should not break the bond of sym-pathy between painter and sitter. The painter should remain entire master of the situation and of his sitter.—*N. Y. World.*

The following list of Grénié tapestry dyes and their equivalents in oil or water colors is given in answer to the requests of many subscribers :

TAPESTRY DIES.	OIL OR WATER COLORS.
1. Ponceau,	Scarlet vermilion with crimson lake.
2. Rose,	Rose madder.
3. Cochineal,	Crimson lake.
4. Sanguine,	Burnt Sienna.
5. Yellow,	Indian yellow.
6. Indigo blue,	Indigo blue.
7. Ultramarine blue,	French blue.
8. Gray,	Neutral tint.
9. Gray green,	Raw umber or yellow ochre and cobalt (mixed).
10. Emerald green	Emerald green and cobalt (mixed).
11. Brown,	Vandyck Brown.
12. Violet,	Antwerp blue and crimson lake (mixed).
13. Black,	Burnt Sienna, indigo and crimson lake.

To clean engravings, expose them to the fumes of muriatic acid and wash well in water. To take out ink spots, use aquafortis, which dilute with water as soon as the action appears to be sufficient. Dry with blotting paper, wash and dry once more. A bath in water in which a little potash has been stirred will finish the process, neu-tralizing any of the acid that may remain.